Museums and the Human Remains Controversies

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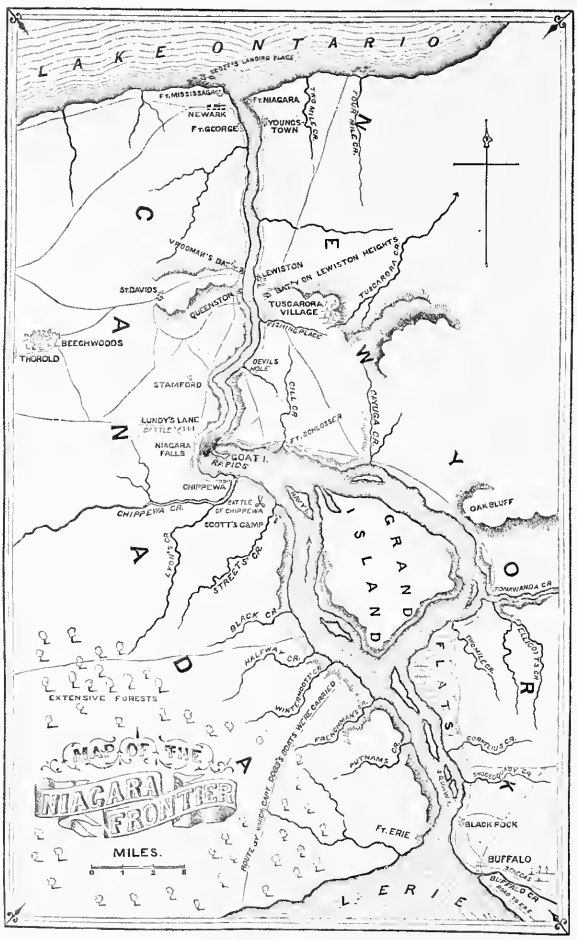


The Niagara Frontier. Fort Erie and the Snake Hill site are located near the bottom of the map across from Buffalo. From Benson J. Lossing,* The Pictorial Field Book of the War of 1812 *(1868, p.382).

Excavation of the 1814 Battle of Snake Hill Site: A Medical History Perspective

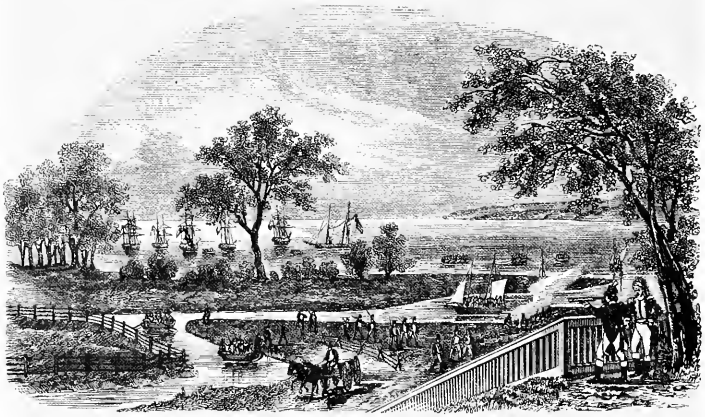
When the American military buries its war dead, it does so with all the ceremony, honor, and circumstance that is their due. Revered clergy accompany the flag-draped caskets of veterans to military cemeteries on home soil, hallowed by the remains of fellow fallen soldiers. This is no less true for men who died as a result of battle nearly 180 years ago than it is for those who fight in our own day. Indeed, the return of a dead soldier is an ancient imperative. In Plutarch's *Apothegms*, the Spartan mother directs her son to "Come back either with your shield or upon it." One does not question whether the son returns, only his relation to his shield. Time-honored tradition held that no man would be left on a field, particularly an enemy field. If the urgent press of combat prevented troops from providing a proper burial for their comrades, however, a less formal activity would take place resulting in an immediate and less ceremonious interment than would otherwise be desired. Hope would persist for a fitting reburial.

Dentition was of particular interest for the researchers, and in many of the burials, teeth and jaws survived in exceptionally fine condition.

So it was with the remains of twenty-eight American soldiers who died in Canada in the War of 1812. The remains of the men came to the attention of the American military—for the second time—when they were exposed by construction workers in 1987 along the shores of Lake Erie in the Town of Fort Erie, Ontario, immediately across the Peace Bridge from

by Adrianne Noë

The opinions or assertions contained in this essay are the private views of the author and do not necessarily reflect those of the Department of the Army or the Department of Defense.



The Port of Buffalo in 1813. From Benson J. Lossing, The Pictorial Field Book of the War of 1812 (1868, p. 380).

Buffalo, New York. The men had died as a result of injury or sickness and were buried at a site named for the battle that occurred there. The excavation of the site—which included twenty-eight primary inhumations in two principal groups as well as an ox burial and several medical waste pits—occupied several dozen scholars for many months. Although the excavation is complete, work with the unearthed materials and data collected from them will go on for many years.

What follows is a short account of my experiences with the excavation and activities that followed the discovery of the remains, the research that supported several subsequent reports, a short summary of relevant military events, and an overview of anthropological, archaeological, and historical findings.

The Discovery

In the spring of 1987, construction workers discovered some human bones while excavating a Fort Erie lakefront site. Appropriate town, province, and national officials, including the Heritage Branch of the Ministry of Culture and Communications and the Cemeteries Branch of the Ministry of Consumer and Commercial Relations, were asked to investigate; ultimately they recommended a cessation of all digging until the physical extent and nature of the cemetery could be identified.

With the support of the property owners, the town of Fort Erie contracted with Toronto-based Archaeological Services, Inc. (ASI) to conduct the study. ASI President Ronald Williamson and his associates quickly evaluated the situation by researching local history and examining early findings, and they determined that the site was likely to be an American cemetery from the War of 1812. With that knowledge, and with the Town of Fort Erie and the governments and military of Canada and the United States, Dr. Williamson led an interdisciplinary team of workers and researchers in an international effort to determine at least the nationality of the Snake Hill soldiers, if not their specific identities.[1] Project participants met their main goal: repatriation with full military honors.[2] In support of this goal, teams of researchers, conservators and archaeologists produced several volumes of preliminary findings about their work.[3]

The full participating group of thirty-six formal members, plus volunteers, were organized into four main sections—archaeology, physical anthropology, history, and artifact conservation and identification. Representing seventeen different institutions, the members undertook projects that required the coordination of information from many disciplines in order to provide physical anthropological analysis, information about military clothing and personal gear, medical and mortuary practices, and several historical contexts within which to make all of the data useful.[4]

Many of the team members worked at the site itself, exhuming the remains bone by individual bone. They worked in propane-heated military tents on the shores of Lake Erie in November and December of 1987, sometimes under great pressures of time or impending storms. Others worked at remote sites, including local historical sites, several museums, the Center of Military History, and the National Archives. The work offered a unique opportunity not only to try to determine who was buried at Snake Hill but also to examine a set of military events and their aftermath.

The Battle of Snake Hill

In order to place in context the burials exhumed by the team, a brief history of the site and the events that happened there will be useful. At the close of the French and Indian Wars, the British had located the initial fort at the confluence of the Niagara River and Lake Erie. Although the site was prone to flooding and problems from winter ice buildup, the location was an important one, for with the signing of the Treaty of Paris in 1783, the Niagara River became an international boundary. British forces remained at the fort into the next century, using it as a site for lumbering and agriculture. Nearby, a number of private structures were used variously as kitchens and living quarters; one saw use as a hospital. After severe storms destroyed much of the fort in 1803, new construction began, but portions of the older structure remained

occupied for several years more while work proceeded on new ditching and stone bastions. Later construction added a ravelin to the east side, log and dirt magazine on the southern end, and cedar pickets around the rear. There were three artillery emplacements by 1813.

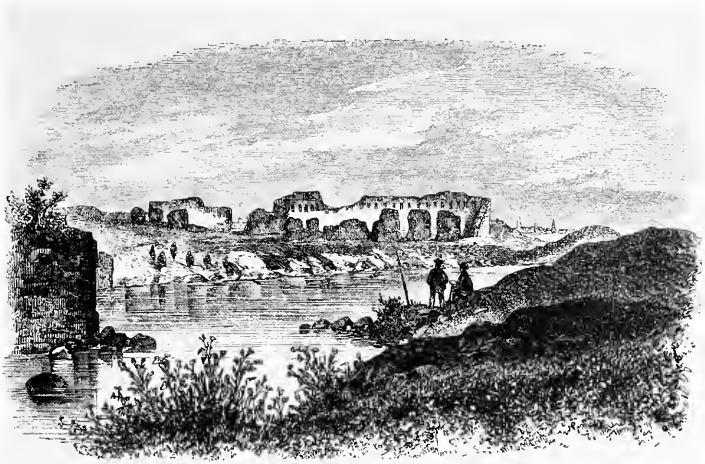
Influenced by American operations along the frontier in 1813, the British voluntarily abandoned the fort, burning the barracks and destroying the magazines shortly before American occupation on May 29. In December, British forces reoccupied the fort, which by then included American-built batteries to the front and rear. The southernmost of the batteries may have been in the area of Snake Hill—a mound approximately eight hundred meters to the west of the fort itself and well within weapon range. In early July of 1814, American forces, both regular and militia, had captured Fort Erie and were using it to establish a base of supply. They buried their few dead on site and sent their wounded to a hospital in nearby Buffalo.

Immediately after the July occupation, American and British forces engaged in a pair of particularly serious battles not far from the fort: Chippawa on July 5 and Lundy's Lane just two weeks later. Those battles forced the weakened Americans back to Fort Erie by month's end, where they began to prepare for attack by strengthening the ditches, breastworks, abatis, and other physical defenses that fortified about fifteen square acres around the fort structure and linked the fort to a system of parapets and traverses. An 800-yard parapet and ditch paralleled the lakeshore to the left of the fort. Its terminus was Snake Hill.

By the first of August, major British forces had camped within six miles of the fort, and a series of daily skirmishes began in the area.

Fortification activities and the erection of hospital tents in secluded sites continued. Snake Hill itself became the site of a major battle on August 3 with the arrival of siege guns. Lined by American men and guns, the fort received the first of the weeks-long British bombardment on August 13; the heavy barrages continued for more than a day. Snake Hill had become the center of much of the fighting because its shoreside location and elevation had made it an important vantage from which to repulse British troops moving around the fort along the water's edge. Early on the fifteenth, reinvigorated British attacks began on the site. Although the defense of the site was difficult, the Americans ultimately triumphed; hundreds of British were wounded or killed. American casualties mounted as well, although ten times as many British fell, particularly when a small powder magazine at the fort exploded from an unknown cause.

More or less fierce fighting continued for at least another month. There were several significant skirmishes after the arrival of British reinforcements late in August. In one September attack alone, Americans sustained over five hundred casualties, and the



Ruins of Fort Erie as sketched by Benson J. Lossing in 1860. From Benson J. Lossing, **The Pictorial Field Book of The War of 1812** *(1868, p. 846).*

British over 650. Although American forces retained Fort Erie, they did so at great loss of human life and limb.[5]

Medical attention and burial became an increasingly urgent issue over the course of the summer. Under the direction of their surgeon Dr. Amasa Trowbridge, the 21st Infantry established a field hospital at the encampment near a structure used by the British for the same purpose. Another facility set up by the 23rd, in the vicinity of Snake Hill, was considered the "general hospital."[6] Yet a third hospital, staffed by a New York militia, was set up near the fort in September west of Snake Hill. All hospitals remained busy throughout the siege, and it is likely that they shared some material and equipment to care for those who could not be transported for treatment across the river to a general hospital at Williamsville or elsewhere. It is likely also that the field hospitals shared graveyards for the enlisted men who would not be transported back for burial.[7]

Analysis of the Snake Hill Cemetery

The exhumation of the Snake Hill cemetery was a carefully orchestrated and executed task. The job began by defining the area for work, and then stripping away the topsoil and subsoil with a large backhoe operated by a highly skilled ASI staff member who removed as little as one-fourth inch of dirt at a time in order to minimize damage to burials. By noting slight

soil color changes, archaeologists identified two major burial areas. Each was separately tented for security and protection from exposure to the elements. Each tent was lit and heated. Once each individual burial was safely covered, excavation and recording activities began. Archaeologists, assisted by many other participants, dug pedestals around each shaft to facilitate the delicate removal work. The sandy lakeside soil was removed from the shaft and from around the skeletal materials, first with a shovel, then a trowel or a pick, and finally a brush for very close work. As each burial was completely exposed, it was carefully drawn, videotaped, and photographed, so that all elements in each grave could be studied in their relative positions. Each bone, button, badge, tool, or other item was examined *in situ*, and then recorded, identified, cushioned, bagged, and boxed for transportation to the fort or to the Royal Ontario Museum for further study. A study of all the materials removed from the burials has revealed a great deal about the lives and health of soldiers and about medical and burial activities at Fort Erie. Generally, evidence from each burial has been divided into two sets of objects: anthropological and archaeological.

The anthropological data yielded specific information about the individual: sex (in each case, the burial was that of a male), age at death (based on appearances of certain bone characteristics, cranial suture closures, and dental eruption), race, estimated stature (based on lower bone length), and battle injuries or patterns of illness. Although the information was carefully tabulated and reported, and all proved interesting for the historian of medicine and other scholars, only some will be highlighted in this overview.[8]

Twenty-eight men were buried at the Snake Hill cemetery. They ranged in estimated heights from sixty-four inches to seventy-two inches. The partial exhumation of a few of the sets of remains precluded making height estimates for all the men. In age, they ranged from approximately fourteen to sixteen years to thirty-five to forty years. Nearly half of the individuals showed signs of recent traumatic injury (such as an unhealed shot fracture), and a few evinced fractures several months into the healing process. Others showed signs of a systemic infection or arthritis. In general, dental health was good, although many had multiple caries.

Several of the burials are of particular interest. One had numerous unhealed traumatic fractures indicating severe physical trauma in the rib region, possibly from the direct hit of a six-pound cannonball. In another burial, the left leg was entirely missing; no skeletal or other trace of it remained, moving researchers to speculate about its possible disarticulation. Yet another burial included the remains of a badly shattered skull with only fragmented facial bones. Because the skull was in such delicate condition, the related bones were removed from the burial site as

National Museum of Health and Medicine anthropologist Paul Sledzik treats a skeleton in preparation for intact removal. This process, using polyvinyl acetate, helps consolidate bony structures.

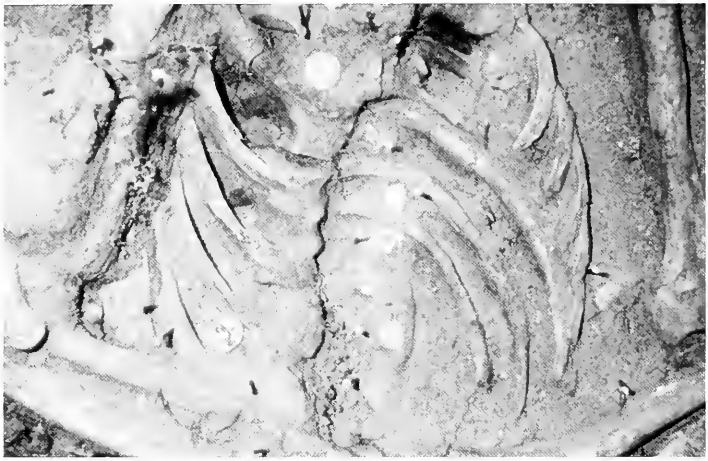
a single unit, soil and all. Once in the laboratory, the bones were disarticulated, and a flattened musket shot fell from within the skull. Although American soldiers used buckshot, it is generally thought that the British did not. Perhaps this individual died an accidental death while cleaning his gun or at the point of a countryman's weapon.[9]

Several of the burials bore evidence of amputations, as did the medical waste pits at Snake Hill. One held an amputated left leg sawed through the femur that had apparently received a gunshot fracture to the knee. A second revealed an assortment of buttons and bone fragments, including a mandible, a kneecap, and an amputated right femur. Still another pit held several groups of skeletal materials. One included a tibia; a second held most of a left leg that had been amputated through the femur; and the third contained bones from another individual. Perhaps the most interesting find was the amputation of both left and right arms of an individual 14 to 17 years of age. Each arm had been amputated above the elbow, although no left hand or wrist was present, and the right ulna showed some trauma.

Amputated bone ends are extremely important in understanding typical acts of medical intervention. By examining the initial cut marks on the amputated bone ends, one can see where muscle was cut through to bone or where a surgeon may have made a "false start" in his work. By examining the cut in cross section,

The three individuals who shared this common grave bore numerous injuries. The left-most (and first) burial had healed fractures of the left clavicle and scapula and three ribs. In the central burial, both ends of the right femur were damaged; the left leg was missing entirely. The fact that there was no trace of the leg led some to speculate about complete surgical disarticulation. The right femur of the last burial had been traumatically shattered; portions of it remained unfound.

one can determine the patterns of striation and estimate the number of strokes necessary to sever a bone. One may even speculate about surgical tool use. How much wear could a bone take? How much wear could a saw take? Or the patient? Or, indeed, the surgeon? It leads, too, to speculations about the regular and extraordinary maintenance of tools and the roles of the surgeons' mates as they exercised their responsibility for caring for and sharpening the surgeon's instruments. In planned research, amputated bone ends from the Snake Hill site and the tools used to make them will be compared to the bone ends and tools from the Civil War and later conflicts.[10]



This individual sustained several unhealed fractures of the arm and pelvis, and fifteen pieces of unfired buckshot appeared in the area of the right pocket. Button locations, marked by nailheads in this photograph, have led researchers to believe he was buried fully clothed, possibly as a result of severe sudden injury.

Archaeological findings were equally as revealing about life and death around the Snake Hill cemetery. The team ably examined 438 buttons, identifying 221 as American and associating most of them with a specific military unit. Just as critical as the manufactured origins of the buttons, however, was an examination of their relative placement and orientation within each grave shaft, as very little fabric or even fiber survived at the site. Even though many of the copper and brass buttons were corroded or had major encrustations, their location and distribution allowed the team to identify the type and configuration of garment worn by the individual at burial. For instance, the style of button for a coattee was quite different from that for a vest or overalls or trousers. Likewise, button materials differed from garment to garment. Outer buttons might have been metal, of a certain form, and designed with a unique regimental affiliation pattern; undergarment buttons might have been bone and unadorned.

Generally, the position of buttons, coupled with that of the bones, made it possible to determine the physical position of the individual at burial—for instance, whether the ankles or knees or wrists had been bound (a typical practice that made for ease in managing and conveying the corpse to the grave, as well as a tradition-bound funeral preparation). Binding may also be an indication that the individual had been hospitalized, for the act took some time and required

One of the nineteen buttons found with this casketed burial, the pewter "US" shanked button was located near the waist and may be from a set of front-closure overalls.

materials not readily expendable during a battle or hasty burial.

The deterioration of soft tissue sometimes made it difficult to reconstruct the original button position, however, particularly when hands were folded at the waist or below. The absence of folding of a specific garment, such as trousers or overalls, might indicate that the man had received an abdominal wound that would not be apparent as skeletal trauma, as no soft tissue remained for examination. No buttons at all might mean hospitalization in a loose garment or that the man had been stripped for the care of his wounds, with death soon following. In some cases, the clothing seems to have been laid upon rather than enclosing the body, interred perhaps as a gesture of formality. Some weapons and associated burial items such as flints, musket tools, and the occasional spoon were also found with the burials. No medical tools were among them.

Two of the burials clearly included coffins, again suggesting hospital cemeteries rather than hasty battlefield gravesites. Some, too, had straight metal pins near the skeleton, perhaps indicating that a bandage or burial shroud had been pinned in place.11 In addition, all but three of the sets of remains were oriented in positions that placed the head toward the west—a practice consistent with centuries of Christian burial practice.12 There is very little documentation about specific burial practices at Snake Hill, yet two American accounts

survive. One writer mentioned that men who had been captured as deserters were commanded to dig graves with only enough distance between them to allow for a man to kneel in the space. A second observed that the burials occupied two days.[13]

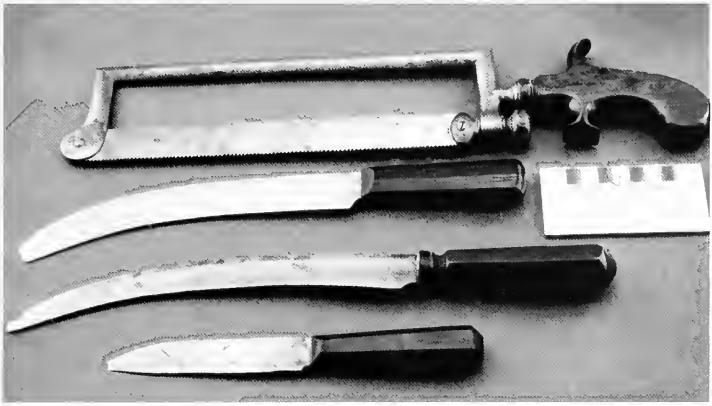
Battlefield Medicine in the War of 1812

Medical activities typical of those at Fort Erie are fairly well documented in historical literature. The surgeon James Mann wrote in his 1816 *Medical Sketches of the Campaigns of 1812, 13, 14* that he had seen no significant improvements in the military medical system since the first war with England, and that few surgeons and physicians recorded their medical experiences from the earlier war.[14] Although the forms of disease, illness, and injury were similar to those of the Revolutionary War, surgeons were nevertheless unfamiliar with hospital systems and their functions, and maladies peculiar to traveling and stationary armies remained foreign.

The health of American troops on the Niagara frontier varied during the year preceding the Battle of Snake Hill. The early months of 1814 saw some diseases attain epidemic status. Pneumonia, rheumatism, intermittent fever and lake fever (the latter two referring to malaria), cholera, syphilis, small pox, dysentery and non-specific diarrhea were all relatively common. By early summer, the general health was improving.[15] Soon after the start of the siege of Fort Erie, however, the "rainy season" brought on a series of illnesses including quickly debilitating and dehydrating dysentery and diarrhea. Typhus, in particular, was severe among the militia, and because the general approach was to wait until the third day of fever to send the patient to a hospital, medical treatments were often of no avail.[16]

At Snake Hill disease accounted for at least as many deaths as trauma. For example, many of the prevalent diseases that were rapidly dehydrating left no skeletal trace. Drug overdoses might also have been responsible for some deaths. Calomel, acetite of lead, and tartrate of ammonia were fairly freely administered; as was bloodletting.[17] Each, in overdose, may have been fatal. In general, the list of medical activities was short.

The surgeon's tasks were principally confined to trephining, probing, draining and suturing. His instrument kit probably contained crane bill forceps, levers, tenacula, lancets, catheters, probes, bougies, knives, scalpels, saws, forceps, and gorgets.[18] Surgeries were limited by the practical knowledge of the day; the chest and abdomen rarely were opened. At Fort Erie, as elsewhere, amputation was the "prototypical act of nineteenth century surgery."[19] As a wound management tool, it made a ragged, complicated trauma into a relatively cleaner and less complicated one. Its variants were generally well described in the contemporary literature. Both Mann and the Canadian surgeon John Douglas thoroughly discussed the technique and whether it should be performed on the battlefield or



Surgeons' tools from the era and the area are comparatively rare. These are from an amputating kit used at Fort Erie by Assistant Surgeon Archimedes Smith in 1814 and are in the collections of the National Museum of Health and Medicine, Armed Forces Institute of Pathology, artifact number M 151 00345.

later in the hospital setting. Although associated mortality rates for amputation ranged from ten to ninety percent, surgeons relied upon it often.[20]

Mann himself was of the opinion that otherwise healthy individuals could survive amputation. He preferred the relatively small risk of the surgery to the greater risk of transportation to a general hospital. Amputation may account for a number of site deaths, and Mann's descriptions precisely account for the appearance of the details and striations, and even the small tab of bone at the break site of materials from the burials and the waste pits. In his 1816 work, he described training a young surgeon in his first such procedure. The surgeon happened to be Amasa Trowbridge, who served with the 21st Infantry at Fort Erie and was deeply involved with the care of the wounded there.[21]

In an undated manuscript, Trowbridge recounted his experiences at Fort Erie:

> On the 26' [of July 1814] the American Army commenced a retreat to Fort Erie and then began to fortify itself. The enemy followed and three days after opened a constant and heavy fire upon the fort with cannon and mortars, which was continued with constant picket skirmishing until the 15' of August, when a general assault was made upon the Fort and encampment by the enemy. They were repulsed with great slaughter. The repulse was decisive by the explosion of a magazine under the bastion of the Fort, killing 300 and wounding 149 with 5 officers and prisoners. There was

> scarcely a wound known by the surgeon that was not exemplified among them. A special order from the General assigned to Dr. Trowbridge the wounded of the enemy.
>
> In a few days the greatest part were sent to the Gen'l. Hospital, Buffalo. A few of the Americans were killed and 27 wounded. Previous to this time there had been daily skirmishing and cannonading which had scarcely an interval of an hour night or day. The following is an extract from Genl. Ripley's report of that transaction dated August 17' 1814. "I close with stating to you of the highest terms of approbation the skillfulness exhibited by Dr. Trowbridge, Surgeon of the 21' Reg. of Infantry, and his mates Everet and Allen. Their active, humane, and judicious treatment of the wounded both of the enemy and our own together, with their steady and constant attention to the duties of their station must have attracted your observation and, I am confident, will receive your approbation." . . . Two days were occupied in burying the dead.[22]

The Snake Hill cemetery makes evident the sort of work Trowbridge describes, yet takes it one step beyond. As a historian accustomed to entering one more library, turning one more page, and exploring one more manuscript, I found turning one more trowel of dirt a new experience. The midwinter lakeside frustrations of cold and damp were made the less important as the bones themselves took on a primary quality that no document could rival, at least for the initial research phases of the project. Some of the work was fascinating, some tedious, some difficult, and only the most experienced archaeologists even attempted to remove from the sand the bones that had eroded to the consistency of wet crackers.

Yet, those primary materials— bones, buttons, the occasional artifact— formed a core around which significant historical research revolved. Excavation of the Snake Hill cemetery allowed us to form new conclusions about health, medical practice, and military mortuary affairs, but it also demanded rigorous traditional research. The site work was only the first step in a highly orchestrated action of great proportion for medical history. In a way that documentary research could never provide alone, the excavation offered the extreme likelihood that the remains were those of fallen American soldiers with specific unit affiliations, even if the work did not assign them individual positive identifications. Although we failed to return to them their names, we did not fail to return them to their home.

■

Numerous dignitaries, both civilian and military, American and Canadian, visited the site as work progressed. Dr. Ronald Williamson, president of Archaeological Services, Inc., led this tour, which included site researchers, the United States Army Surgeon General, the Executive Officer of the Armed Forces Institute of Pathology, and the American and Canadian military project attachés.

Notes

1. The archaeology section included Deborah Steiss, Beverly Garner, Andrew Clish, Lawrence Llewellyn, Sgt., U.S.A.F., Stephen Thomas, Julie MacDonald, Martin Cooper, and Anne Wingfield. The physical anthropology section included Jerry Cybulski, Douglas Owsley, Susan Pfeiffer, Shelley Saunders, Robert Mann, Peer Moore-Jansen, Marc Micozzi, Sean Murphy, and Paul Sledzik. The artifact and conservation section included Anne MacLaughlin, Julia Fenn, Charlotte Newton, Steve Poulin, Sandra Lougheed, Rene Chartrand, Patrick Wilder, Donald Brown, and Donald Kloster. The history section was led by LTC Joseph Whitehorne, USA, and included Rene Chartrand, Patrick Wilder, Adrianne Noë, David Owen, Tim Shaughnessy, Dennis Carter-Edwards, and Charles G. Roland. Ronald Williamson was the project director, and Robert MacDonald served as his administrative assistant. Lt. Col. D. W. Prosser and LTC R. Trotter, USA, led respectively, the Canadian and American military missions.

2. Although the detailed arrangements at military funerals differ from occasion to occasion, the honors afforded the soldiers of the Snake Hill cemetery included those typical of a contemporary "full honor (company) funeral"— national and unit colors, a military band, a company consisting of two platoons drawn from the service of which the dead had been a member, and various honor guards, escorts, and armed salutes. At the Snake Hill ceremony, military service members from two nations participated. United States military members currently entitled to this type of service include those who have attained the rank of Lieutenant General, Vice Admiral, Major General, Rear Admiral, or Brigadier General. See Table of Entitlements in B. C. Mossman and M.W. Stark, *The Last Salute: Civil and Military Funerals* (Washington, DC: The Department of the Army, 1971). See also Army Regulation 600-25, "Salutes, Honors, and Visits of Courtesy" and Army Regulation 600-30, "Personnel: Honors to Persons."

3. Archaeological Services, Inc., *The Snake Hill Site: A War of 1812 Cemetery,* 2 vols. (Toronto: Archaeological Services Inc., 1988). These volumes serve as the single-most important basis for this essay. I am indebted to David Owen and LTC Joseph Whitehorn, USA, who headed the team of historians, whose essays on British operations, site history of Fort Erie, and United States operations; were particularly useful.

4. Institutions included the Armed Forces Institute of Pathology; the Armed Forces Medical Museum (now the National Museum of Health and Medicine of the Armed Forces Institute of Pathology); Archaeological Services, Inc.; the Canadian Armed Forces; the Canadian Conservation Institute; the Ontario Ministry of Culture and Communications, the Ontario Ministry of Tourism and Recreation; McMaster University; the National Museum of Civilization, National Museums of Canada; the Niagara Parks Commission; Parks Canada; the Royal Ontario Museum; Sackett's Harbor Battlefield Historic Site (New York); the Smithsonian Institution; the Toronto Historical Board; the University of Guelph; the United States Army; and the University of Tennessee.

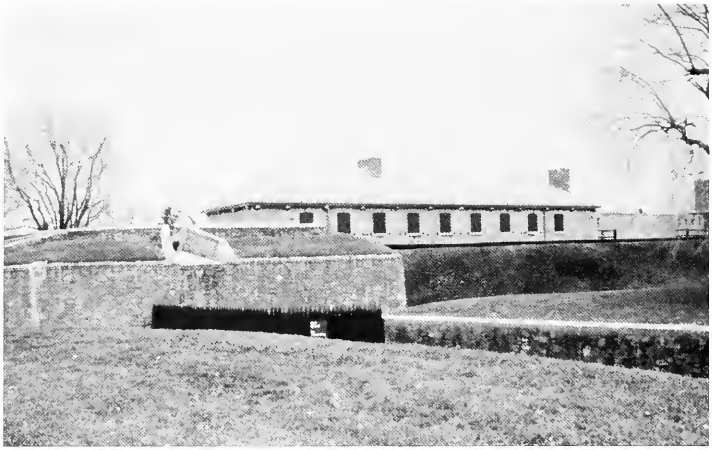
In flag-draped transport cases at the June 1988 Fort Erie repatriation ceremony, each soldier was accompanied by an honor guard and carried to a waiting hearse by active service members representing military units descended from those present at Snake Hill. Additional military units, dignitaries, and many other individuals, including the original archaeology team, attended the services. The hearses traveled in a guarded entourage to a federal cemetery in Bath, New York, where the soldiers were buried with military honors at graveside.

5. A list of all American units and their locality of origin and surgeon (if any known) follows: 1st Infantry, New Jersey; 9th Infantry, Massachusetts, surgeon: Joseph Lovell; 11th Infantry, Vermont and New Hampshire, surgeon: Gordon P. Spencer; 17th Infantry, Kentucky; 19th Infantry, Ohio; 21st Infantry, Massachusetts, surgeon: Amasa Trowbridge; 22nd Infantry, Pennsylvania, surgeon: Edward Scull; 23rd Infantry, New York, surgeon: Silas Fuller; 25th Infantry, Connecticut; 1st Rifles, Pennsylvania, Maryland, Virginia, Kentucky, and Tennessee, surgeon: William Henning; 4th Rifles, New England and New York; Pennsylvania Volunteers, surgeon: Samuel Mealy; New York Volunteers, surgeon: Guardner Wells. Canadian and Indian volunteer regiments also fought at the battles. See Volume I, Appendices 4, p.2; and 6, pp. 1-7 in Archaeological Services, Inc., *The Snake Hill Site.*

6. General hospitals had earlier been established at Burlington, Vermont; and Plattsburgh, Malone, and Greenbush, New York. The nearest general hospital to the Fort Erie site was that established in July of 1814 at Williamsville, eleven miles from Buffalo. It contains mass British and American graves. One additional hospital had been built at Sandytown in Buffalo, New York, for casualties from Chippawa and Lundy's Lane. It was nearly too busy by mid-August to receive additional casualties and served principally as a way-station for patients destined for Williamsville. See David Owen, "British Operations and Site History of Fort Erie," pp. 8-14, and Joseph Whitehorne, U.S. Operations, pp. 15-47, in Archaeological Services, Inc., *The Snake Hill Site,* Volume 1.

7. Several general points regarding burial at Fort Erie are relevant. A British mass grave was discovered and exhumed at Fort Erie in the 1930's. American officers' remains were sent to Williamsville as a matter of routine. Many British dead went unburied, their remains having floated down the nearby river. *Ibid.*, p. 33.

8. *Ibid.*



Fort Erie. The present rebuilt structure is located on the grounds of Old Fort Erie, now a part of Parks Canada, at the Town of Fort Erie, Ontario. The fort itself is approximately one and one-half miles east of the Snake Hill site. (This and all photographs in the essay are courtesy of the Otis Historical Archives, National Museum of Health and Medicine, Armed Forces Institute of Pathology, Washington, DC. The photographer was Sgt. Lawrence Llewellyn, USAF, Armed Forces Institute of Pathology.)

9. *Ibid.*, p. 153. Another burial included foreign matter fragments, perhaps from the explosion of the powder magazine.

10. Specimens and artifacts to be compared are from collections of the National Museum of Health and Medicine and will include an examination of known tooth patterns in medical saws and trephination devices.

11. T. Dale Stewart, *Essentials of Forensic Anthropology* (Springfield, Illinois: Charles C Thomas, 1979).

12. Bertram S. Puckle, *Funeral Customs, Their Origin and Development* (London: T. Warner Laurie, 1926).

13. *Diary of Jarvis Frary Hanks, 1831-42*, Entry A00-263. Buffalo and Erie County Historical Society, NY.

14. James Mann, *Medical Sketches of the Campaigns of 1812, 13, 14. To Which are Added, Surgical Cases, Observations of Military Hospitals; and Flying Hospitals Attached to a Moving Army, an Appendix Comprising a dissertation on Dysentery: which Obtained the Boylston Prize Medal for the Year 1806, and Observations on the Winter Epidemic of 1815-16. Denominated Peripneumonia Notha; as it Appeared at Sharon and Rochester, State of Massachusetts* (Dedham, Massachusetts, H. Mann and Company, 1816).

15. Mary C. Gillet. *The Army Medical Department, 1775-1818* (Washington, D.C.: Center of Military History, 1981).

16. Mann.

17. Louis C. Duncan, "The Medical Service in the War of 1812, Part IV: The Campaign of 1813," *Military Surgeon* 72 (February 1933): 144-150. For evidence of bloodletting during the campaign, see particularly p. 150.

18. No known surgical kit used at the site is extant. The list is composed as a combination of tools suggested for general surgical use by Sir Charles Bell and the contents of a surgical kit used at the naval battle of Lake Erie in the collections

of the National Museum of Health and Medicine. Sir Charles Bell, *A System of Operative Surgery, Founded on the Basis of Anatomy, 2 vols. 1st American Edition. (Hartford, CN: Hale and Hosmer, 1812).*

19. The best and most useful statements and assessments of amputation as a military surgical technique or any other medical activity of the era are to be found in the work of Charles G. Roland, M.D., Jason A. Hannah Professor of the History of Medicine at McMaster University. See particularly his "War Amputations in Upper Canada," *Archivaria* 10 (1980): 73-84. See also his introduction to John Douglas, *Medical Topography of Upper Canada (Canton, MA: Science History Publications, 1985),* originally published in London in 1819, and "Medical Aspects of the War in the West in 1812," in K. G. Pryke and L. L. Kulisek, eds., *The Western District: Papers from the Western District Conference* (Windsor, Ontario: Essex County Historical Society, 1983).

20. Roland, "War Amputations in Upper Canada."

21. Mann. Later in his career, Trowbridge wrote again of his Fort Erie experiences, this time in the context of the immediate or delayed amputation argument. Trowbridge, "Gunshot Wounds," *The Boston Medical and Surgical Journal* 17 (July 4, 1838): 341-347.

22. Amasa Trowbridge Papers, Library of Congress Manuscript Division, Washington, DC, AC 1556. Trowbridge is alternatively spelled "Troubridge" in some locations.

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About the Photographs.

The photographs that accompany this essay are only a few of the thousands that are the work of forensic photographer Jay Llewellyn, Sgt. USAF, assigned at the time to the Armed Forces Institute of Pathology. He participated in all phases of the excavation.

The Frontier Trooper's Thanatopsis. Frederick Remington .

Harper's Weekly, *April 13, 1889 .*

Human Remains: Issues Confronting Museums and the Scholarly Disciplines

"Do you know where *your* ancestors are?" This question, on the bumper sticker of a South Dakota pickup truck captures the essence of contemporary controversies over human remains. A day seldom goes by without the media informing us about people somewhere in this world who are offended, scandalized, or manipulated through the abuse of their ancestors' remains.

In the recent past, we can think of the vivid images of faithful Iranians trying to touch the body of Ayatollah Ruhollah Khomeini and the bearers losing control of the bier; of the French wrestling with the desecration of a Jewish cemetery by vandals who disinterred an elderly man's body and impaled it on an umbrella; of the unending anguish of MIA family and friends over the absence of a body from conflict in Vietnam; of armed Mohawk Indians holding Canadian police and soldiers to a standoff over expansion of a golf course onto a Native cemetery; of Philippine foreign policy shaped by the quarrel over the final resting place of Ferdinand Marcos; of the legal battles over the ethics and legality of medical researchers using discarded body tissues without the knowledge of the surgical patient--all examples, by no means exhaustive, of the daily struggle of human beings to enact in every death the values of their society. According to a myth of identity common to many peoples, not to know where the ancestors are is to violate the most basic value of life, which results in being confined to a realm of chaos, drift or hell.

Controversy about human remains is not new. Greek tragedies, among many examples, embody prehistoric values of obligation that still ring true to the present day: The living are obliged to provide proper care for ancestors' remains. What is new is the impact of such controversies on professional, political and social institutions that, until recently, have seldom acknowledged overtly and honestly the symbolic and psychological values of obligation held by the living for the dead; seldom acknowledged that is, except in funeral service.

Among many peoples, the obligation for putting the body properly to rest has been extended to maintaining

by Glen W. Davidson

the place of rest as sacred ground. In one of my studies, I discovered that in seventeenth century New France, today's Quebec, settlement was unsuccessful until cemeteries were established.[1] Prior to that, members of the aristocracy who could afford to do so had the body preserved in alcohol and shipped back to the Mother Country, and those of lower status were simply buried in unconsecrated ground and forgotten. Only when consecrated cemeteries were allowed was a parish established and the second and third generations of New France claimed the land around the site as "home." They then knew where their ancestors' remains were.

It is taboo in most places of the world to disturb the remains of deceased ancestors except under the most limited of circumstances. For both Mohawks and non-Native residents of Quebec, the issue is not whether building a golf course takes precedent over sacred ground but whether Native burial grounds are to be respected as sacred, and therefore protected, ground.

This is not to say that Native cemeteries are never disturbed. Historically, destruction of burial sites has often been the first act of dominion a conqueror imposes on the vanquished precisely because those being subdued are demoralized. A major tactic for destabilizing a people is to violate the values of ancestral obligation and to desecrate the burial sites. In any language, to desecrate, is "to treat...contemptuously, often in a way that provokes outrage on the part of others" or among the ancestors' progeny.[2]

What also is new about the treatment of human remains is the expressed outrage toward the professions and social institutions, like universities and museums, over the systematic collection and storage of skeletal materials and grave goods without regard to the sensitivities of their progeny. "Do you know where *your* ancestors are?" is a question which exposes competing world views and personal practices. It is a question that is forcing scholars to re-evaluate their methods, politicians to rethink their ideologies and social institutions to reexamine their practices.

Protection of Burial Sites

At first, issues surrounding disturbance, excavation, theft and display of skeletal material and grave goods were addressed to archeologists and physical anthropologists by increasingly strident Native American organizations--groups like American Indians Against Desecration (AIAD), the International Indian Treaty Council and the World Council of Indigenous Peoples. Members of those organizations protest excavation of Native American burial sites and use of their ancestors' remains for collection, study or display in museums throughout the continent.

They are aware, as many museum professionals are not, that collection policies far more reflect the political goals of a given era than collection rationales which justify keeping materials

in question. Despite growing attention and sensitive response to their concerns by social institutions, governmental agencies and, perhaps, the public-at-large, excavations by scholars, grave robbing of skeletal material and grave goods by collectors, and cavalier treatment of accidental disturbance by developers and road crews heighten the outrage felt by indigenous peoples and lead many to believe that they continue to be the targets of discrimination and subjugation.

Native American political action groups have provoked more than just concerns about protection of burial sites and sanctity of human remains, however. Their outrage uncovers more than issues of moral and legal rights of minority citizens. Presuppositions--scholarly and lay, religious and secular, private and public--are being exposed and must be reexamined by us all. Presuppositions are values and ideals unexamined. They are often part of our unconscious and are seldom articulated except at times of crisis. The presuppositions that the living feel as obligations for the remains of their ancestors are becoming conscious, are being examined and reexamined, and are revealed as a concern common to all peoples, not just minorities.

Like other issues that began as the concern of one group, concerns about the sanctity of burial sites have arisen in more general populations. For example the sanctity of burial sites has become a major problem in areas of population growth. Offenses range from the insensitive to the criminal. Road crews disinter human skeletal material, developers attempt to overtake land use for cemeteries in developed areas for use "of the living," and graves of Civil War, Spanish-American War, and now, World War I veterans are being looted for such items as military insignia, belt buckles and other hardware. In some regions, the looting of Native American burial sites constitutes a major part of the local economy. Contrary to the assertions of some political action groups, researchers have found that dominant as well as minority groups now are incensed by burial site disturbances which violate any ethnic sensitivities.[3] The same researchers have found that most citizens assume that there is legal protection for such sites and stiff penalties for desecration. The human remains controversies, however, have exposed the inadequacy of legal protection.

Without major publicity, new laws have defined regulations for the forest and park services, land management bureaus, military branches, county and municipal authorities and federal, provincial and state departments of transportation that ensure better protection of burial sites, ancient and modern. Many states and provinces have organized commissions to review cases of the accidentally disinterred. While redressing grievances of Native Americans, both the legislative and executive branches of government have begun to assert initiative.

Illinois is a good example of what is occurring throughout the continent.

Illinois: A Microcosm

After citizens began complaining about looting of Amerindian graves in southern Illinois, state legislators passed a law in August of 1989 protecting unregistered graves and grave markers from intentional vandalism, desecration and looting. "The question of who owns our past continues to be a subject of wide debate among philosophers, historians, genealogists, and Native American groups in forums across the nation," said Governor James Thompson, who supported the measure. "To some, it is a question of philosophy or ethics. To others, the question is an intensely personal one, threatening family ancestry and heritage. In Illinois," the Governor continued, "it is a question of immediate concern to those who wish to halt the 'mining' of fields for artifacts and bones that bring increasing profits in open artifacts markets." The law set tough criminal and civil penalties for the intentional disturbance or desecration of unregistered graves. According to the Governor, the law would "deter destruction of the burial places of prehistoric Indians, pioneer settlers and Civil War veterans."[4]

Subsequently, on the recommendation of the Director of The Illinois State Museum, Gov. Thompson announced in January 1990 that the state-owned Dickson Mounds Museum would close to the public the internationally known excavated burial site contained in an enclosed room of the museum's main building. Speaking for Native Americans, Jesse Takes-Horse, a Crow Indian from Dow, Illinois, hailed the Governor's action as a show of respect for both ancient and living Indians.

Dickson Mounds, about fifty miles northwest of Springfield, includes a variety of exhibits focusing on the people who lived along the Illinois River about nine hundred years ago. The skeletons of 234 pre-Columbian Indians are displayed. Most have been uncovered but not otherwise disturbed since they were buried.

In his recommendation to the Governor, the Director of the State Museum noted that the mood of the nation, generally, had turned against displays of human skeletal materials. Decisions to remove such displays by the Smithsonian Institution in Washington, D.C., and many other museums in the nation, had left Dickson Mounds as one of the last museums in the country with such an exhibit.

Jonathon Haas, vice president for collections and research at Chicago's famed Field Museum for Natural History, noted that his institution removed skeletons of Native Americans a year earlier because "many American Indians feel such displays demean them; it's against their dignity and appeals to prurient interests." He noted the paradox of continuing to display the Field Museum's extensive collection of remains of people from such cultures as ancient Egypt. "But the Egyptians haven't demonstrated a

Native American Burial Site, Dickson Mounds Museum, IL.

(Courtesy of The State Journal-Register/*Bill Hagen, photographer)*

strong cultural concern, like the Native Americans have about the subject," he noted.[5]

The uproar in western Illinois over the closing of the Dickson Mounds burial chamber brought the presuppositions of the issue into sharp focus. The state representative of the area argued that not only would the decision discourage tourism but have a negative economic impact on the area. He also argued that the Mississippian-period Indians who lived in the Dickson Mounds area died out about six hundred years ago and had no direct lineage" to Native Americans of today.

While most of the citizenry who became involved in the controversy seemed to see the issue as a power play between political action groups for influencing the Governor, an ugly presupposition of dominant society began to emerge. Declared one community leader opposing the Governor's decision: "In this country, too many decisions are being made by minorities that run contrary to the wishes of the majority....I'm no bigot or racist but the burial grounds are a part of our heritage and history."[6] A Caucasian, he failed to note that the part of "the heritage and history" to which he referred is the history of a dominant group treating another group contemptuously "in a way that provokes outrage" among the ancestors' progeny, the definition of desecration.

In retort, an editor of the *Illinois Times* opined that: "I don't think that respecting the dead obliges me to respect their skeletons, too. Investing the remains of the dead with sacred or magical significance is a practice the West once dismissed as primitive; it is proof of our sentimentalization of Indians...that we now applaud, even envy their primitiveness because it leaves them in closer touch with the primordial than we are."[7]

The Governor was to reverse his decision in August of 1990. He claimed to have erred earlier. Using the original objection of the state legislator that there is no connection between the Mississippian Indians whose bones are exposed at Dickson Mounds and any living tribe of Native Americans, he declared that the groups insisting on reburial had "no legitimate claim" to do so. Some scholars, and all of the Amerindian leaders disagree about there being no connection.

Political pundits had a different explanation for the Governor's reversal. Thompson was about to retire after fourteen years in office. A Republican, Thompson's announcement to close the burial site in January was promptly opposed by the Democratic gubernatorial candidate. By August of 1990, polls indicated that the Republican and Democratic candidates were tied in a dead heat. Some of the Governor's advisors feared that the museum controversy would be enough to swing the election away from his chosen successor. By reversing himself before the election, Thompson kept the museum from becoming a campaign issue in the November election. The museum

controversy became a non-issue when the Republican candidate, Jim Edgar, announced his opposition to closing the burial site. The strategy worked. Edgar won election by one of the narrowest margins in state history.

Governor Thompson's public rationale for reversing his earlier decision, however, bears further examination because it holds crucial implications for the professions. Thompson stated that "there is simply no cultural or ethnic tie between the men and women who lived here and any remaining Indian tribe in America." He did not mention spiritual bonds, symbolic identifications, or psychological relationships. While no direct descendant of the Pilgrims, himself, the Governor claimed those ancients frequently in official pronouncements as "our ancestors," a discrepancy more than one citizen called to his attention.

Literature in the history and anthropology of religions amply demonstrates that values--including the values of obligation toward the dead--are transmitted as much through spiritual bonds, symbolic identifications, and psychological relationships as through genetic or ethnic ties.

Regardless of one's position on the issues of disinterring and displaying skeletal remains and grave goods, burial sites do constitute symbolic relationships for both the living and the dead. The roots of relatedness, connection and orientation in the human psyche lie in the value given symbols associated with one's ancestors, including human remains and their "proper" place. Connections between the living and the dead are more than mere sentiment; consider the unburied body of former Philippine President Ferdinand Marcos and present-day politics of that troubled country; the association between Chinese demonstrations for democracy, the death of a revered former premier and Quingming--the National Day of Mourning; and the symbol of the Katyn Forest site, where some 4,500 Polish officers were executed by Soviet secret police in World War II, for political restructuring in eastern Europe.

Frustrated by results of the November 1990 election, Native Americans succeeded in persuading State Representative Lee Preston (D-Chicago) to sponsor a bill that would outlaw the public display or sale of any human remains in Illinois. Both Native Americans and representatives of the general public testified at legislative hearings in March of 1991. Some argued that the controversy demonstrates how museums can be used to perpetuate racism. Others argued that viewing exposed skeletons was "a profound and moving experience." Rep. Preston suggested in rebuttal that if seeing skeletal materials was educational, facsimiles could easily be created.

Representatives of the state's museums and universities testified on opposing sides. Professor Raymond Folgelson of the University of Chicago's famed anthropology department, for example, compared the Dickson Mounds exposed burials to a form of

"obscene pornography" because so many visitors had no background by which to interpret what they were seeing. While display of skeletons might sometimes be justified for educational purposes, he allowed, in the case of Dickson Mounds, "I'm not sure what one learns by staring into an unearthed pit of naked skeletons."

Director William Sumner of the Oriental Institute at the University of Chicago disagreed. "The confrontation of an individual that lived over 2,000 years ago fires the imagination of school children and adults alike....It inspires a striking recognition of how the past is a continuation with the present, and leaves a lasting impression that leads to an enriched, intellectual life."[8] Sumner's arguments seemed to balance out the arguments of his opposing colleagues, at least in the minds of the legislators. House Judiciary Committee members took the rare step of recommending that Preston's bill not pass, which means it would require a three-fifths vote of the House just to revive the legislation for debate. Ironically, Sumner's arguments in defense of exposing skeletons supported the idea that symbolic or spiritual connections are what do exist between ancients and living peoples. That is an argument Governor Thompson and proponents for open display had not wanted supported.

For their part, opponents to skeletal display have turned to picketing and aggressive disruptions at Dickson Mounds Museum. In October of 1990, activists leaped over a railing separating the burial mounds from the viewing platform and covered about ten of the skeletons with pre-cut blankets. Director Judith Franke reported no damage. On April 7 of 1991, activists again entered the burial pit and attempted to rebury the skeletons, using shovels and surrounding dirt. The activists described the attempt as "spontaneous" after demonstrators had burned incense, sprinkled powder, sung to drum beats and chanted prayers. No arrests were made and the mounds remain open. "It's a public museum," Franke observed. "You can't say, 'Aha! The Indians are here!' and close it."[9] Nevertheless, by May of 1991, she was recommending erection of a clear plastic wall around the museum's burial excavation as a security measure.[10]

Challenge to Museums

While archeologists and physical anthropologists often have found themselves the primary adversaries in debate with indigenous peoples over human remains and grave goods, the battlegrounds for the debates have been the national, state and university museums, where these items are conserved as part of our historical and cultural heritage.

One of the first issues to confront museum professionals was whether to accept Native American artifacts without credible provenance. Arizona's Heard Museum for example, scandalized the scholarly community when the directors returned to control of Native American tribes

some one-of-a-kind artifacts received from private collectors. The directors argued that the new policy was based on the ethical principle that the goods originally would have been held as common rather than private property, and that the hidden provenance was probably theft. Many scholars and the media at the time claimed that the Heard had acted under political expediency in response to pressure from political action groups. Past donors and avowed future donors seemed most outraged, however, because their investments in grave goods would soon lose value if other museums followed similar policies. Many other museums have now adopted such policies.

Debates about accepting artifacts of dubious provenance have raised questions about the ethics of keeping older holdings, like the thousands of Native American skeletons collected in the nineteenth century, in part reflective of the War Department's policies to display war booty, and later, after "Indian affairs" became the responsibility of the Interior Department, reflective of an ethnographic policy. Public display of skeletal remains has always been an offense to Native Americans. According to one poll, the subject is among the top five concerns for them today, considered as important as tribal sovereignty and water rights.[11]

In 1979, in a study required by the American Indian Religious Freedom Act, a wide range of complaints against museums were identified: unexplained display of human skeletons, improper display and handling of sacred materials, and possession of stolen artifacts.[12] By 1985, a survey of museums in the United States and Canada with large collections of Native American ethnographic materials found widespread confrontation by Native Americans demanding return or repatriation of skeletal material, grave goods and sacred objects.[13]

Ethical responsibilities for museum holdings gained the attention of Congress in 1989. Under legislation authored by Senator Daniel K. Inouye (D-Hawaii), Congress authorized the Smithsonian Institution to return approximately twenty thousand Indian remains to tribes that could identify them. Museums in Boston, New York and Palo Alto soon divested their holdings as well. Now, about twenty-eight states have similar legislation addressing the issue. For example, Missouri Governor John Ashcroft signed a bill in June of 1990, allowing Native Americans to establish sites to rebury their ancestors' remains. The Missouri Historical Society then turned over its holdings to the American Indian Center of Mid-America in St. Louis for ceremonial purification and proper reburial. "To retain them would be a deep-seated violation of someone's religious beliefs," said the Society's director. Tommy Garrett of the Bureau of Indian Affairs in Washington is quoted as saying that the Society's action was "a recognition that Native Americans possess the same rights as everyone else. Everyone would be appalled if someone dug up the Pilgrim's graves and put

The New Indian War. The 1878 cartoon by Thomas Nast represents the Federal interdepartmental fight over governmental policies toward Native Americans in the late nineteenth-century.

(Courtesy of The Pearson Museum)

the remains on display, yet many are not concerned if we do it to Indians."[14]

Challenge To The Professions

Political theater and ethnic psychology aside, clinicians and scholars still must face the issues of whether data acquisition from examination of human tissue should or can take priority over personal and ethnic sensitivities. On the one side, it is argued that some knowledge of past peoples is available only through study of human remains, and that such studies have direct bearing on the welfare of people today. On the other side, it is argued that personal and ethnic sensitivities should proscribe any examination of skeletal and other anatomical materials. Both sides have been pressed to exaggerated and shrill extremes.

Despite the growing complexities of the repatriation and reburial issues, like most questions of ethics, answers are found as much in the process by which the questions are investigated as in the content of the issues. For many years, researchers have found laboratory uses for discarded human tissue and fluid. The discovery of the DNA molecule and methods of gene splicing have made such uses possibly lucrative. What used to be waste has been turned into a source to be mined.

A recent suit has set a precedent. Fourteen years ago, John Moore, a sales manager from Seattle, had a rare form of leukemia that led to surgical removal of his spleen at UCLA. Researcher David Golde used the spleen to develop a cell train patented as "Mo-cell," which, the researcher claimed, could destroy cancerous cells without harming healthy ones. Golde sold the right to market the cell train to two biomedical companies. Moore sued for a share of the potential profits. Moore's lawyers argued that the patient has rights to his own unique genetic makeup. Golde's lawyer argued that Moore gave up his rights when he signed the surgical release.[15]

In the summer of 1990, the California Supreme Court found in favor of the researcher, Golde. But the justices were clear that, in this day and age, release of body parts is permissible only with *informed* consent. To be informed includes notification of possible uses that the tissues may be put to in the future as well as the present. Medical schools, despite the shady history of grave robbing to support anatomical teaching in the eighteenth and nineteenth centuries, now require consent of the deceased through prior arrangements for use of cadavers. Consequently, physicians--and by extension all professions--must obtain informed consent from patients before acting except under carefully defined circumstances of patient incompetence.

Medical schools, like Wright State University in Ohio, recognizing that many if not most people have the felt obligation to care properly for the remains of their ancestors, provides a memorial service once a year to

which are invited relatives and friends of persons who had willed their remains to science. The School has its own cemetery for burial of the remains after anatomical study. Where people had once been scandalized by the use of human remains for purposes not known or approved by decedents, today ethnic groups and the population at large are accepting such uses when informed and consenting.

Archeologists and physical anthropologists have argued that human remains and grave goods provide data not otherwise available about the past and, therefore, have priority over the values and sensitivities of living populations. What was not presumed necessary by them before the recent controversies surrounding human remains was accountability to persons and minority groups from whom they were drawing their material, or about how they conducted their studies, or what was presumed in their methods of investigation, or what could be expected from their findings.

Reconciling the Conflicts

Like the impact of malpractice controversies which forced improved practice of medicine, and the Fair Trade Commission's impact on more open practice of funeral service, controversies over the study of human remains have forced museum professionals, archeologists and physical anthropologists to reexamine their methods as to both validity and reliability. In its most recent pronouncement, the American Anthropological Association (AAA), in sharp contrast to the stance taken by its membership just a few years ago, acknowledged that "a balance must be struck between the research and educational interests...and the concerns of different cultures, as presented by their designated representatives and leaders." In its most pointed directive yet, the AAA Commission on Native American Remains states: "Anthropologists have a responsibility to make clear the local relevancy of their work and be open to questions generated by descendant communities which should be involved in the decision making process".[16.]

Why so much of the human remains controversies focus on museums has troubled both journalists and readers alike. For many, museums are places of benign interest particularly appropriate to visit on a rainy afternoon. In fact, museums are repositories of artifacts of people, times and places most often dissimilar from the people, times and places who visit. In addition, many museum policies have been repositories of outdated governmental ideologies, ethnic prejudices, and benefactors' vested interests. Whether benign or scholarly interest, a common starting point for resolving the controversies about human remains is the citizen's right to know--not only what a thing is and, by logical extension, what a thing is not; but who is making the interpretation and who is not.

In his book, *Cultural History and Material Culture*, Thomas Schlereth defines material culture as "a mode of

inquiry that uses artifacts (along with other data) to explore cultural questions."[17] "In order to interpret, and not merely display their collections," argues Jane C. Busch of Cooperstown's History Museum Studies Program, "museums require material culture...to put the artifacts in their...historical and cultural contexts. Unfortunately, museums have been collecting objects much longer than they have been collecting contexts."[18]

Medical artifacts in general, but particularly human specimens, have been collected for generations primarily for purposes of identification rather than for the explanation of contexts. An encapsulated tumor, a healed bone, a whole skeleton were displayed to have whatever impact was stimulated in the viewer. Over the last fifteen years, however, "the interpretive history exhibition--the exhibition with a theme, a point of view, an argument--has triumphed," notes Gary Kulik, editor of *American Quarterly.* "No major history museum or historical society is prepared to defend letting objects speak for themselves." During the same period, Kulik argues, the premise that an artifact, to be educational, cannot be stripped of its context, has in turn led to inclusion of attitudes, perspectives and behaviors of minorities. "History museums have broken decisively with the old canonical history. They have become agents for inclusion. And some history museums," he concludes, "have gone even further in their willingness to take on controversial subjects."[19]

The Vermillion Accord

1. Respect for the mortal remains of the dead shall be accorded to all irrespective of origin, race, religion, nationality, custom, and tradition.

2. Respect for the wishes of the dead concerning disposition shall be accorded whenever possible, reasonable, and lawful, when they are known or can be reasonably inferred.

3. Respect for wishes of the local community shall be accorded whenever possible, reasonable, and lawful.

4. Respect for the scientific research value of skeletal mummified, and other human remains (including fossil hominids) shall be accorded when such value is demonstrated to exist.

5. Agreement on the disposition of fossil, skeletal, mummified, and other remains shall be reached by negotiation on the basis of mutual respect for the legitimate concerns of communities for the proper disposition of their ancestors, as well as the legitimate concerns of science and education.

6. The express recognition that the concerns of various ethnic groups as well as those of science are legitimate and to be respected will permit acceptable agreements to be reached and honored.

World Archaeological Congress, First Intercongress on the Disposition of the Dead.

Vermillion, South Dakota August 1989.

By addressing controversial subjects, museum personnel must be aware of the covert as well as the overt agenda of the various points of view that become part of the stories placed on exhibit. The controversy over the use of autopsy material from Abraham Lincoln by the National Museum of Health and Medicine, for example, amply illustrates that not only is no artifact without its story and context but no museum exhibit, symposium or publication is without its presuppositions, and, too often, its hidden political agenda. As radical as many regard Jeremy Rifkin of the Foundation on Economic Trends, even some of his detractors thought his reaction was on target to the McKusick Panel Report: "The scientists involved in this study are using the corpse of a revered President of the United States for a public relations stunt to draw attention and research funds for a particular disease."[20]

Just as ethical and legal provenance of objects are considered basic to a professionally managed museum today, so too, should be open, honest, and complete revelation of sponsorship. At the root of the human remains controversies as articulated by minority groups, is how museums have been used for propaganda purposes. The display of Amerindian skeletal material and grave goods has reflected the shifts from the nineteenth-century military objectives of the War Department, to the early twentieth-century ethnographic objectives of the Interior Department, to, some would argue, the equality agenda of the Justice Department today. Regardless, how well have museum personnel prepared their audiences to explore the issues that propaganda and hidden sponsorship seek to diminish?

We all stand in debt to the Native American groups that first began to define the issues which now confront us all. Each scholarly discipline and every informed citizen are challenged to reexamine our suppositions, a thanatopsis if you will, not unlike that of Remington's "The Frontier Trooper" a little over one hundred years ago. In another's death we not only contemplate the meaning of our own mortality but need to face the pretensions of our own points of view.[21]

■

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Notes

1. Glen W. Davidson, "In Search of Paradigms: Death and Destiny in Seventeenth Century North America," in *Encounters with Death: Essays in the History of Anthropology of Religion,* ed. Frank Reynolds and Earl H. Waugh (College Station: Pennsylvania State University Press, 1977).

2. *Webster's New Collegiate Dictionary* (Springfield, MA: G & C Merriam Co, 1979), p. 304.

3. Thomas E. Emerson and Paula G. Cross, "The Sociopolitics of the Living and the Dead: The Treatment of Historic and Prehistoric Remains in Contemporary Midwest America," *Death Studies* 14(1990): 555-576.

4. Bulletin of the Office of the Governor (Springfield, IL) August 11, 1989.

5. *The State Journal-Register* (Springfield, IL) January 23, 1990, pp.1f.

6. Ibid.

7. James Krohe, Jr., "Old Bones," *Illinois Times* (Springfield) May 17, 1990.

8. *The State Journal-Register,* March 20, 1991, p. 14.

9. Ibid., April 9, 1991.

10. Ibid., May 5, 1991.

11. Michael Tackett, "Reburial Revives Indian's Rights," *Chicago Tribune,* June 17, 1990, Sec. 1, p. 3.

12. Walter R. Echo-Hawk, "Sacred Material and the Law," ed. George P. Horse Capture, *The Concept of Sacred Materials and Their Place in the World* (Cody, WY: The Plains Indian Museum, 1989).

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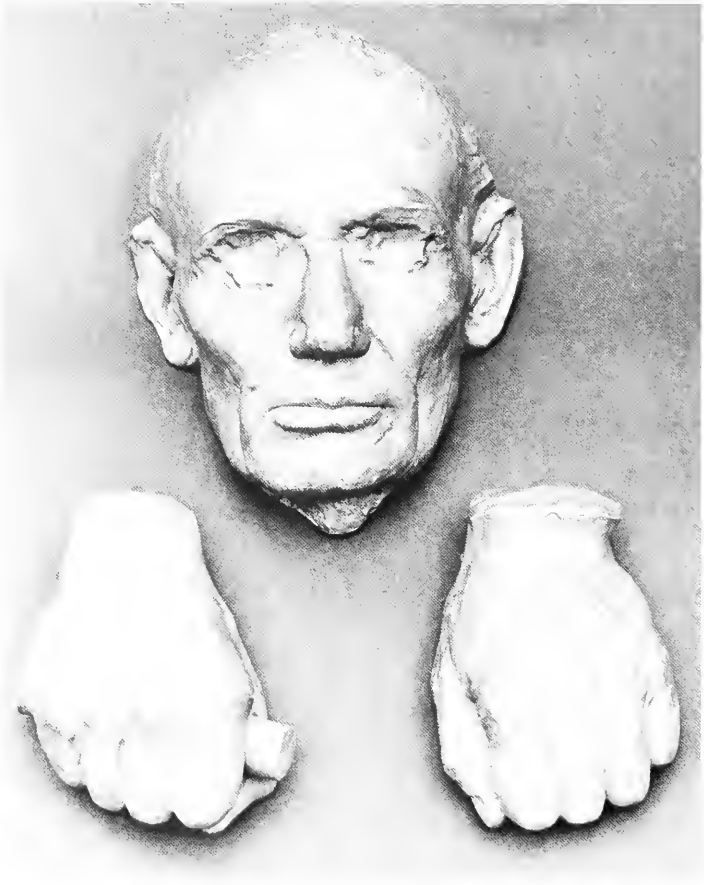

Life Mask and hand casts of Abraham Lincoln by Leonard Volk. 1860. Note the swelling of the right, compared to the left, hand.

(Courtesy of The National Museum of Health and Medicine)

When the Patient Is Abraham Lincoln

Both scientists and historians value knowledge for its own sake, although they have very different ways of arriving at knowledge. For many years, for example, it has been seriously debated whether President Abraham Lincoln had Marfan's Syndrome, the most common inherited connective tissue disorder.[1] Marfan's Syndrome is inherited in an autosomal dominant fashion. The genotype will be reflected in the phenotype (although there is variable expression), and the gene cannot remain hidden in one or more generations. In approximately 15% of cases, however, the genetic defect is sporadic; it cannot be traced to a parental inheritance and probably results from a new spontaneous mutation.

The most prominent clinical manifestations occur in the skeletal, ocular and cardiovascular systems due to weakness of the connective tissues. Affected individuals are prone to have serious abnormalities and injuries of bones and joints, the lenses of the eyes, the heart, and the aorta and other major blood vessels. People with Marfan's Syndrome also grow to be tall and gangly, often with a gaunt facial appearance. Diagnosis has been problematic because of extreme variability in what is presented clinically. Marfan individuals often die young due to one or more cardiovascular abnormalities.

Whether President Abraham Lincoln had Marfan's Syndrome has been of historical interest. Physicians with an interest in history and historians with an interest in medicine have debated the point since Marfan's Syndrome was first described in 1896 by a French physician. The question has not been resolved on the historical evidence but continues to provoke new efforts in medical detective work. New techniques in molecular biology and genetics have led to the first request to test Lincoln's medical specimens held by the National Museum of Health and Medicine.

The Past and the Proposal

The National Museum of Health and Medicine has existed since 1862 as the national medical repository, first as the Army Medical Museum and currently as a component of the Armed Forces Institute of Pathology. The Museum and the Institute have amassed, since 1862, nearly 2.3 million medical specimens obtained from performing medical, surgical and

by Marc S. Micozzi

The opinions or assertions contained in this essay are the private views of the author and do not necessarily reflect those of the Department of the Army or the Department of Defense.

pathological procedures. The specimens are maintained as medical collections. Among the most historic are those taken during the autopsy of President Abraham Lincoln after he was shot at Ford's Theatre in April 1865. In a twist of fate, the museum occupied Ford's Theatre as its first home after the Civil War, since the theatre had been closed as a place of entertainment after Lincoln's assassination.

Then, as now, the autopsy was performed to establish clearly the cause of death for a grief-stricken nation consumed with rumors about Lincoln's assassination. Since the Army Medical Museum was the first (and, at that time, only) federal medical institution, its doctors were called upon to perform this sad task. Thereafter, the Army Medical Museum, and the subsequent Institute of Pathology have generally been assigned jurisdiction for investigating deaths of assassinated presidents and their assassins, as well as other civilian and military leaders.

Consequently, Lincoln's medical specimens—and those of other presidents—have passed into the collections of the Museum. The Museum holds fragments of bone and strands of hair taken from around the gunshot wound of the head, as well as the blood-stained shirt cuffs of Dr. Edward Curtis, who performed the autopsy.

The request to test for DNA in the Lincoln specimens was received from Darwin J. Prockop, M.D., Ph.D., a pioneer of the new medical genetics, and Director and Chairman of the Jefferson Institute of Molecular Medicine at Jefferson Medical College of Philadelphia. Dr. Prockop and his colleagues have been refining powerful DNA tests for detecting the genes associated with such heritable disorders of connective tissue as osteogenesis imperfecta, Ehlers-Danlos Syndrome and Marfan's Syndrome. A few milligrams of bone or samples of bloodstains may furnish enough DNA for Dr. Prockop to complete his proposed work. One of the many questions associated with this request, however, is that 126 years after Lincoln's death, we do not know for sure whether there is any testable DNA remaining in the Lincoln specimens. Destructive testing would be required to determine whether viable DNA is even present for possible testing.

Should viable DNA be found, Dr. Prockop proposes to make a library of Abraham Lincoln's genes. As he and other scientists close in on the genes for Marfan's Syndrome and other conditions, Lincoln's DNA library could be tested for the presence of those genes.

In recognition of the substantial ethical, social and technical dimensions of this proposal, the Museum has recruited a national panel of experts chaired by Dr. Victor McKusick, University Professor of Medical Genetics at The Johns Hopkins School of Medicine.

The Process and Procedures

To begin the process of considering Dr. Prockop's proposal in a thorough, responsible and comprehensive fashion, the Museum organized a symposium on Lincoln's health on February 9, 1991. The symposium was held in conjunction with "Public Science Day" of the American Academy for the Advancement of Science (AAAS). The headquarters of the AAAS are also in Washington, occupying the site of another former home of the Army Medical Museum. The symposium participants reviewed the historical evidence bearing upon Lincoln's health and possible Marfan's Syndrome.

With all the prior writings on Lincoln's health, none had taken the approach of organizing the historical evidence in a manner that would be recognizable to modern medical practice—the clinicopathologic correlation (in large part developed in this country at the Army Medical Museum over the past one hundred years).

As a physician, pathologist and medical examiner, I not only presented the autopsy evidence but also attempted to reconstruct a hypothetical visit of Lincoln to his doctor, moving back and forth through time. I included Lincoln's probable chief complaint (of little help in diagnosing Marfan's), his own history of his health and illnesses, his review of systems, family history, and physical examination, including neurological and mental status exams. The family history was particularly poignant—an overwhelming pattern of early death, certainly consistent with Marfan's Syndrome, but also consistent with life in frontier America. It should be remembered that maternal and paternal histories may not be of determining value due to the frequency of spontaneous Marfan's.

I paid particular attention to one piece of physical evidence overlooked by past writers—the Leonard Volk life mask of Lincoln's face and hands. The items have been on display at the National Museum for decades and have been seen by millions of visitors. They were made by sculptor Leonard Volk in November 1860 just after Lincoln's election as President. (The mask has sometimes been mistakenly identified as a death mask.) In the casts of Lincoln's hands, the right hand appears larger than the left. In fact, the hand is swollen—so swollen and painful that Lincoln asked to hold a broomstick while the cast was setting because it was too painful to make a fist. Lincoln's right hand was swollen and painful from greeting well-wishers in 1860. Would someone with delicate bones, joints and connective tissues—as in Marfan's—be more susceptible to such injury? People with Marfan's do suffer injuries to tissues and joints easily, and the connective tissue defect may have prevented Lincoln from locking his fingers and wrist. In someone with Marfan's Syndrome, would this be the result of shaking too many hands?

After review of all the available evidence (and in the best forensic

tradition), I would have to say that I do not have an opinion based on a reasonable degree of medical probability as to whether Abraham Lincoln had Marfan's Syndrome. Anyone who would say so is probably stretching the limits of available medical evidence beyond the historical record and beyond modern understanding of the Syndrome.

If the question cannot be answered on the basis of available historical information, should modern medical testing be permitted on Lincoln's medical specimens as an attempt to search for the Marfan gene?

To help answer that question, the National Museum of Health and Medicine assembled a national panel of experts, chaired by Dr. McKusick and including Dr. Lawrence Mohr, White House physician; Professor Cullom Davis of Springfield, IL, Senior Editor of the Lincoln Legal Papers Project; Edward Alexander, former President of the American Association of Museums; Cheryl Williams, representing the National Marfan Foundation; Dr. Tim O'Leary, The Armed Forces Institute of Pathology; Lynne Poirier-Wilson, The Strong Museum; Dr. Phillip Reilly, Executive Director of the Eunice Kennedy Shriver Center; and Dr. Victor Weedn, Chief, Armed Forces DNA Identification Laboratory. The panel was constituted and charged very specifically to review the ethical and social implications of conducting genetic tests on human medical specimens held by the Museum.

The panel convened at the Museum on May 1, 1991 to examine the available materials and took up the question. On May 2, the panel made their initial recommendation to the Museum Accessions Committee (see accompanying Statement of the panel). The final authority rests with the Board of Governors of the Armed Forces Institute of Pathology, ultimate custodian and guardian of the medical materials under existing laws and directives. Chairman of the Board of Governors is the Assistant Secretary of Defense for Health Affairs, Dr. Enrique Mendez, who will give the matter his personal attention because of the gravity of the request.

Possible Problems and Precedents

It should be emphasized at the outset that the materials requested by Dr. Prockop are medical specimens, obtained as part of valid medical procedures and practices. References to exhumation and "grave robbing" by some journalists and even some historians (who ought to know better!) are inappropriate, irresponsible and inaccurate. The specimens have never formed part of Lincoln's mortal remains which were interred after his death, public viewing in state, and funeral.

Legally, the Lincoln medical specimens are in the public domain. Unlike the personal effects of some modern presidents, there are no laws specifically pertaining to their disposition. The applicable laws and directives are those that govern the mission of the Museum: in effect, to collect, preserve, conserve and make available

Lincoln Specimens. Fragments of bone and strands of hair from around the gunshot wound of the head are surrounded by the blood-stained shirt cuff of Dr. Edward Curtis. Note the probe Dr. Curtis used to locate the bullet.

(Courtesy of The National Museum of Health and Medicine)

for research and educational purposes, specimens of anatomy, pathology and evidence of medical therapy.

Lincoln as a public figure is properly in the public domain. Upon his untimely death the statement was made, "Now he belongs to the ages." Does that statement properly apply to his DNA? Lincoln has the rights of any individual to privacy, including the privacy of his medical records and information. How, 126 years after his death, can we reconstruct Lincoln's view (his own wishes or those of his immediate family) toward releasing medical information?

In modern context (and this question will be decided in modern context) the patient's own wishes are primary in medical matters. With the related issue of the "living will," an individual specifies in a legal document his or her wishes for medical life support in the event of a terminal state. Without a living will and without legal heirs, the court may attempt to reconstruct what the patient's wishes might have been, based upon evidence of the patient's attitudes, beliefs and behaviors in related matters.

Some historians have suggested that we attempt to reconstruct what

Lincoln's wishes might have been, based upon historical evidence. It is well known that Lincoln was a supporter of all types of research—including medical research. The National Academy of Sciences and the Army Medical Museum were founded during his presidency. Lincoln was also at times concerned and curious about his own health. And, insofar as a tradition has been maintained for several decades in Washington of exhibiting Lincoln's medical specimens to millions of visitors, perhaps the line of Lincoln's privacy has already somewhere been crossed. There is a precedent for testing the specimens: more than thirty years ago Col. Joseph Akeroyd, M.S.C., U.S. Army, obtained Lincoln's bloodstains from the cuffs of Dr. Woodward and was able to identify President Lincoln's blood as Type A.

Some modern presidents have been quite open with their medical information. President Dwight D. Eisenhower, for example, discussed his heart attack suffered in office with the press; Dr. Paul Dudley White, the President's physician, broadcast medical prognostications to the entire nation. Lyndon Johnson lifted his shirt to show his surgical scar. Senator Estes Kefauver, a vice presidential and presidential contender himself, died of Marfan's Syndrome in 1963. On the other hand, President John F. Kennedy was less open about possible medical conditions, and President Franklin D. Roosevelt was not at all open about his polio or other medical problems. The implications of making known medical information on national leaders may go beyond individual rights and must also be addressed here.

Finally, the Museum must address its obligations to its collections. The fundamental purpose of the National Museum of Health and Medicine is to collect, conserve and preserve medical materials while making them available for research and educational purposes. What if the proposed research requires destruction of minute amounts of irreplaceable material? What is the greater good? Or do we wait, like archaeologists, for possible techniques that do not require destructive testing of collections? New legislation requires that American Indian biological and cultural materials held by museums be repatriated to tribal groups for burial or reburial. What is the obligation to extract scientific information from these materials before they are returned, forever mute, to the earth?

Because the National Museum of Health and Medicine, and other museums around the country, hold medical specimens of historic figures, the panel's work will be establishing precedents for both destructive testing of collections and medical testing on national leaders.

The Promise and Perspectives

As we have seen, both scientists and historians value knowledge for its own sake, although they have very different ways of arriving at knowledge. The question of Lincoln's Marfan's Syndrome has generated

numerous scientific and scholarly publications and popular articles over the past thirty years. Aside from the intrinsic value of knowledge, this research may have contemporary social importance.

Dr. Prockop's proposed research may hold promise for many sufferers with Marfan's Syndrome (40,000 people in the U.S. alone). Having a "genetic disorder" can be a difficult status for Americans today. Our society is in the process of redefining what disease and disability should and should not mean. Knowing what medical conditions a great historical figure like Lincoln may have overcome may be helpful to that definition as an inspiration to others with disorders, diseases and disabilities.

Also, while the clinical diagnosis of Marfan's Syndrome often remains difficult, the prognosis is improving due to modern medical therapy. Drawing the attention of physicians, as well as the public, to the condition is one of the reasons for the American Medical Association's sponsorship of the project. A young man I autopsied in 1983 had appeared healthy and strong at the time of his unexpected death. His spider-like fingers gave me the clue to hunt for Marfan's Syndrome; indeed, I found all the signs were there including a ruptured aortic aneurysm due to Marfan's. Many other young people with Marfan's lead vigorous lives with unrecognized disease until they die suddenly and unexpectedly. Marfan's remains too often unrecognized, and any attention to the condition by the public and physicians can only help.

Improved awareness of the enormous power of modern genetic testing is another value of the project. If Lincoln's gene library can be recreated, what about anyone else's? What are the social implications of being able to identify a person's genes—to predict what diseases they may have before the symptoms appear? What will be done with such information for medical screening in the workplace, in families, in personal health choices, and by the insurance industry, among others? By simply drawing attention to these issues, the project has done a service whether specific testing of Lincoln's specimens proceeds or not.

Some argue that what is written in Lincoln's DNA library is not historically important. After all, he did, in fact, die of an assassin's bullet at age fifty-six, whether or not he was about to die from Marfan's. If Marfan's Syndrome was part of his genome, it probably did not affect what he wrote. It is precisely because persons are ultimately what they read and write that it may be significant to allow the testing of Abraham Lincoln's genes to go forward. If Lincoln accomplished what he did by becoming what he read—despite a suspected genetic disorder—this might illustrate the point quite well.

For years natural scientists have debated whether genes (nature) or environment (nurture) determine essence. In anthropological terms, the issue is whether biology or culture is the

major determinant. It is, in fact, both. Environment almost always plays a significant role. Even here, ascribing the "essence" of people to environmental influences is sometimes labeled "environmental determinism" and criticized for discounting the role of ideas and individual greatness.

In medical terms, even the most serious genetic disorders are amenable to some environmental control, whether by altering diet, physical activity or other aspects of lifestyle. And diseases thought to be due primarily to environment or lifestyle show considerable individual variation in genetic susceptibility. As health scientists, it should be our goal to determine what constitutes a healthful physical and social environment, not just to determine "genetic causes" of disease.

If it can be determined that President Lincoln did indeed suffer from Marfan's Syndrome, his life may provide an even more inspiring perspective on human capability. Mr. Lincoln may render yet another important service to his country by drawing attention to the implications and limitations of new biomedical technologies for genetic testing.

■

Note

1. Gabor S. Boritt and Adam Borit, "Lincoln and the Marfan Syndrome: The Medical Diagnosis of a Historical Figure," *Civil War History* 29 (1983): 212-229.

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Advisory Statement by the Panel on DNA Testing of Abraham Lincoln's Tissue

Extraordinary advances in molecular genetics have greatly increased our ability to discern genetic information from human tissue. The Human Genome Project, which aims to map and sequence the entire human genome over the next 15 years, has stimulated much needed discussion on the ethical, legal and social implications of the New Genetics. The National Academy of Sciences, the Institute of Medicine, and The Office of Technology Assessment are each currently involved in major studies of the impact of DNA testing on society. There is a rapidly growing concern that genetic testing may threaten the autonomy of the individual citizen.

The suggestion by Dr. Darwin Prockop of Jefferson Medical College in Philadelphia that new techniques of molecular genetics could be used to resolve the conjecture that Abraham Lincoln had a genetic condition known as Marfan syndrome came at an auspicious time. Lincoln's place at the summit of American history ensured much public interest in a formal response to this proposal, in effect creating a forum for public discourse on the major ethical issue in genetic testing: How may we best accommodate the twin goals of enhancing individual and public health and respecting personal autonomy?

In the early 1960's it was independently suggested by two physicians that Abraham Lincoln had the Marfan syndrome. They based the diagnosis on clinical features and genealogical studies.

The Marfan syndrome is an autosomal dominant disorder of connective tissue with variable manifestations in the skeletal system, the heart and the eyes. Long gangling body build is a notable feature. The most life-threatening feature is progressive dilatation of the first part of the aorta, the large vessel that carries blood from the heart. This can progress to rupture. It has been the cause of sudden death of several famous athletes.

In the three decades since the diagnosis of Marfan syndrome in Lincoln was proposed, early detection of the widening of the aorta by echocardiogram, a form of ultrasound, has been developed. Furthermore, medical treatment for staying the progress in the dilatation of the aorta has been introduced and particularly surgery for

Victor A. McKusick, Chairman

replacement of the aortic valve and the first part of the aorta has been developed to a high level of successful long-term results.

In the last few years evidence has come forward that the defect in Marfan syndrome resides in fibrillin (pronounced fib-rillin or feyebrill-in), a protein in elastic tissue. Study of Marfan families has shown that the Marfan gene is located on chromosome 15. The fibrillin gene has been located on the same spot on chromosome 15. Thus, the presumption is that the "Marfan gene" in fact is a mutated form of the gene that codes for fibrillin. The search is now on to determine what the precise flaw or flaws are in the fibrillin gene in persons with the Marfan syndrome. Once that is known we will have a specific DNA test for Marfan syndrome, a boon to early detection which is so important in the management of the disorder.

The National Museum of Health and Medicine at the Armed Forces Institute of Pathology, the repository and custodian of tissue derived from Abraham Lincoln, convened a panel to advise it on how to respond to Dr. Prockop's request and to comment on related matters. Congressman John Porter (R-IL) gave the panel a charge to answer four questions. Largely in response to this charge, the panel makes the following observations, conclusions and recommendations.

A. Is this proposal consistent with the best traditions of American scholarship and research?

Yes. The panel does not think that a definitive answer as to Lincoln's diagnosis is a major historical question. Nevertheless, given Lincoln's place in history any new fact about him is noteworthy. Further, the health of presidents in general and the specific question of whether Lincoln had the Marfan syndrome have been much discussed already.

Beyond the legal questions, however, is the ethical question of whether or not a portion of Lincoln's remains should be used to amplify and clone genetic material for the purpose of post-mortem testing. There are several matters of concern in this regard:

- Medical institutions, specifically government medical institutions, have an ethical obligation to protect the privacy of medical information and tissue specimens from both living and deceased individuals of which they have custody.

- Presidents and former Presidents of the United States have the same fundamental right to privacy of medical information and tissue specimens as the public in general.

- Exceptions to privacy with respect to medical information and tissue specimens should only be

made when there is compelling evidence that the public good would be better served by disclosure.

B. Does this proposal violate Lincoln's privacy or his views on the disclosure of personal health and medical information? The committee does not know Lincoln's view of the disclosure of personal health and medical information, and it knows of no evidence that clearly argues that Lincoln would, if able, consent to or oppose the test under consideration.

The committee does *not* believe that the proposed test is a legal violation of the privacy of the deceased President. From a legal perspective the privacy interest is extinguished at death. It is true that special considerations may apply to medical records of a deceased person, but, even so, given that Lincoln has been dead for 126 years, has no lineal descendants, and is an uncommonly important historical figure, the committee sees no compelling legal argument to deny access to the samples.

The panel notes that the testing proposed involves blood and tissue samples such as were used in standard clinical diagnosis and that the examinations would be performed in a manner that does not diminish the dignity of the subject.

The panel states in the strongest possible terms that when it concludes that legally Lincoln's privacy would not be violated by conducting this test, it in no way implies that among living persons genetic test data requires any less of a privacy cloak than other medical information. To the contrary, the committee concludes that the privacy interest of living persons (including prominent public figures) necessitates that except under most unusual circumstances those individuals have complete authority over the acquisition and dissemination of DNA test data.

In addition, the committee suggests that proposals to conduct DNA testing of tissue from deceased persons in museum collections should be permitted, if at all, only after: 1) appropriate review with lineal descendents, and 2) careful analysis of whether on balance a public good outweighs the invasion of privacy inherent in testing.

C. Is it acceptable for a museum to allow specimens of great historic value to be destructively tested if a compelling public interest is served by doing so?

Museums have a unique responsibility to preserve objects over the long term. Inherent in their overall mission, however, is the responsibility for research on those objects so that information about them may be disseminated to the public for which they hold the objects in trust.

At times preservation, research, and the end result of interpretation may collide with one another. It is

not uncommon for museums to take minute amounts of paint, wood, or fiber from objects to test for such things as originality, composition, or color. This testing requires the removal of those minute amounts from the original objects and thereby implies a very small loss to the objects. What information may be returned from such testing adds to the overall information on the objects themselves and allows for fuller research and clearer, more honest interpretation.

The panel recognizes that this statement is related to the objects in history, decorative art, and art museums -- manufactured or crafted material, not the remains of human beings. Specifically, the National Museum of Health and Medicine is unique among museums; it is a medical institution charged with the preservation of medical information.

In the instance of Lincoln material, only 10% or less of the samples may need to be used, leaving an adequate amount of the remains to be examined if future technology makes that process more meaningful. Furthermore, the genetic information contained in the samples is not destroyed in the process of testing, but amplified greatly.

The panel emphasizes that it has rendered an opinion on Lincoln DNA studies only in relation to the Marfan syndrome and in response to a specific research proposal. Proposals for other research use of the Lincoln DNA would require separate scrutiny and judgment.

D. Is this proposal consistent with the prevailing standards of professional ethics in the disciplines of science and history?

Yes. The committee advises the museum that it is permissible to allow scientists to perform DNA testing on a small fragment of Lincoln tissue to ascertain if he had Marfan syndrome.

The test should be performed by competent scientists under conditions mutually agreed upon, after a full evaluation of technical testing issues.

The panel strongly believes that such testing should be undertaken only after much preliminary work has defined the major genetic mutations that cause Marfan syndrome. Consistent with the best scientific traditions, testing should be done through a process that allows several competent laboratories to propose protocols. Any DNA extracted and amplified from the sample should remain the property of the museum which should maintain control of its use and disposition.

The committee's conclusion is *not* intended as a generic recommendation that it is permissible to test the remains of dead public figures for genetic and other disorders.

The committee believes that careful investigation of whether Mr. Lincoln had Marfan syndrome may help counter problems of genetic discrimination in our society and will enhance the self-esteem of persons who are carriers of the Marfan syndrome and other disabling conditions.

In summary:

A. Is this proposal consistent with the best traditions of American scholarship and research? Yes.

B. Does this proposal violate Lincoln's privacy on his views on the disclosure of personal health and medical information? Probably not, but special circumstances surround the Lincoln material.

C. Is it acceptable for a museum to allow specimens of great historic value to be destructively tested if a compelling public interest is served by doing so? The methods of DNA study are relatively nondestructive; hence, the deliberations of the committee do not address the general question.

D. Is this proposal consistent with the prevailing standards of professional ethics in the disciplines of science and history? Yes.

The final conclusion of the panel is that exploration of the technical aspects of the Lincoln DNA Marfan study be encouraged to proceed. Meanwhile, the ethical guidelines on DNA testing are continuing to be developed and must be considered before a final decision on whether to proceed with analysis of Mr. Lincoln's DNA.

Cartoon reaction to the McKusick Panel Report. Michael Thompson, cartoonist.

The State Journal-Register, Springfield, IL, May 5, 1991.

A Symposium on Sigmund Freud and Art at the David and Alfred Smart Museum of Art

In 1896, Sigmund Freud acquired two *objets d'art* that formed the modest beginning of what would become a lifelong passion for collecting art. Although these small casts of Florentine sculptures reflected Freud's famous love of Italy and probably his interest in Michelangelo, most of the fragments and figurines he would go on to accumulate over the next four decades represented his extraordinary fascination with antiquity. Eventually crowded in places of prominence in Freud's study and consulting room at Berggasse 19 in Vienna, these ancient Egyptian, Greek and Roman, and Oriental works of art embodied for him humanity's deepest psychic concerns. Using archaeology as a metaphor for psychoanalysis, Freud saw his recovered antiquities as symbols of atavistic truths brought to light through patient, rational inquiry. His art collection played a central role in his mental and emotional life, and its fate was a major preoccupation when he fled Vienna for London in 1938. It was with great relief that, several months after his own emigration, he was able to report to a friend that "all the Egyptians, Chinese and Greeks have arrived."

Sphinx, *Greek, South Italian. Late 5th-early 4th century B.C.*

(Photo courtesy of Freud Museum, London.)

From 19 April to 18 June 1990, the David and Alfred Smart Museum of Art presented the exhibition *Fragments from a Buried Past: The Sigmund Freud Collection of Antiquities*. Co-curated by Lynn Gamwell, Director of the University Art Museum, State University of New York at Binghamton, and Richard Wells, Director of the Freud Museum in London, the exhibition investigates the analogy between archaeology and psychoanalysis that Freud proclaimed and demonstrated in his acquisition of

by Sue Taylor

ancient art and artifacts. Included in the exhibition are sixty-eight statuettes, cylinder seals, vases, and paintings and sculptural fragments, as well as archaeological books from Freud's library, six original prints of ancient sites, and vintage photographs of Freud in his Vienna study. These objects were selected from over nineteen hundred artifacts and four thousand prints and photographs amassed by Freud before his death in London in 1939.

Although the exhibition catalogue, *Sigmund Freud and Art*, elucidates the exhibition in a handsome and comprehensive fashion, exploring the meaning of antiquity, archaeology, and collecting for Freud himself, a number of broader issues are generated by the grouping of objects by the founder of psychoanalysis. Among these issues, for instance, are the humanistic bases of the discipline of psychoanalysis, the cultural context of turn-of-the century Vienna in which Freud made his first acquisitions in 1896, and the subsequent contributions of psychoanalysis to art history and criticism. Also of interest is the general psychology of art collecting, its various motivations and the psychosocial benefits it may provide.

The potential importance of these concerns to Chicago audiences was considerable. A major center for art collecting since the late nineteenth century, Chicago has also been home to the Institute for Psychoanalysis, among the oldest psychoanalytic organizations in the United States, since 1932. Moreover, interest in Freudian psychology, the unconscious, and the irrational has long informed both the production and reception of art in Chicago; witness, for example, the embrace of Surrealism by artists such as H. C. Westermann and by leading collectors such as the Bergmans and Shapiros. It is worth recalling as well the great attention paid to the Smart Museum's presentation of the *Art of the Insane: Selections from the Hans Prinzhorn Collection* in 1985 and the enormous success of the symposium organized on that occasion.

To promote public appreciation of the Freud exhibition and to address the issues enumerated above, the Smart Museum in cooperation with the Institute for Psychoanalysis conducted a symposium on *Sigmund Freud and Art* on Saturday, 5 May 1990. The symposium brought together scholars from various fields for individual presentations and for group response and discussion. Speakers were selected by a committee comprised of Harry Trosman, M.D., Professor in the Department of Psychiatry, University of Chicago, and author of *Freud and the Imaginative World*; Drs. Jerome Winer and Ernie Wolf of the Institute for Psychoanalysis; the Institute's educational outreach committee members Gail Elden and Claire Prussian; and this writer. Chosen to represent a variety of disciplines as well as different viewpoints within the field of psychoanalysis itself, lecturers included analysts and art historians as well as cultural historians, a classicist, and an Egyptologist,

Eros, *Greek, Hellenistic Period, from Myrina, c. 150-100 B.C. terracotta, height 15 inches.*

(Courtesy of Freud Museum, London.)

Sigmund Freud's desk in London study with antiquities.

(Courtesy of Freud Museum, London.)

who examined specific works of art in the exhibition and set Freud, his contributions, and his collection in a historical context, each from the point of view of her or his special field.

The symposium attracted a number of overlapping interest groups, including students and scholars of the University of Chicago and regional colleges and universities, the city's medical and visual arts communities, psychologists and psychoanalysts, as well as members of the general public. Over four hundred attended. The proceedings took place in the Max Palevsky Theater on the campus of the University of Chicago; the proximity of the theater to the Smart Museum allowed access to the exhibition during the symposium and for a special viewing and reception following the program.

Introduced by symposium moderator Harry Trosman, the speakers were: Lorelei Corcoran, Assistant Curator of the Oriental Institute at the University of Chicago; John E. Gedo, M.D., author of *Beyond Interpretation: Toward a Revised Theory for Psychoanalysis*; Donald B. Kuspit, Professor of Art History and Philosophy, State University of New York at Stonybrook; Warren G. Moon, Professor of Art History and Classics, University of Wisconsin, Madison; Rick Emery Robinson, Director of Research at Jay Doblin and Associates; Marian Tolpin, training and supervising

analyst at the Institute for Psychoanalysis; and Stephen Toulmin, Avalon Professor of Humanities, Northwestern University. Among the many fascinating themes that emerged during the course of these presentations were the resistance to psychoanalytic interpretation in art; the actual status—or lack of status—of archaeology as a science during Freud's time; the historical roots of the "Victorian" morality usually ascribed to the period in which Freud developed his theories; and the general psychological and aesthetic frameworks within which collectors of fine art operate.

More specifically concerned with Freud himself as collector were Professor Moon's account of the images of illness and healing Freud's patients would have encountered in their analyst's waiting and consultation rooms, and Dr. Gedo's psycho-biographical observations on the compensatory aspects of Freud's acquisitions, his childhood losses and the transitional experiences he created for himself in restitution. A summary of the symposium must also mention Dr. Tolpin's presentation, rooted in feminism and self-psychology, which celebrated the ability of one of Freud's patients, the poet Hilda Doolittle, to reject certain of the great analyst's speculations about her agonizing writer's block and to arrive instead at her own insights into her personality, relationships, and powers of creativity. Alluding to Freud's description to Doolittle of a statuette of Athena in his collection—"She is perfect but she has no spear"—Dr. Tolpin focused on one documented instance of Freud's use of his ancient artifacts in a clinical context. Bringing together issues of mythology, metaphor, psychology, creativity, female sexuality, and Freudian revisionism, Dr. Tolpin's provocative remarks on "Freud, Athena, and H.D." stood as a telling example of the interdisciplinary richness of the symposium itself, from which a complex picture of Freud and his obsessive love of antiquities emerged.

The importance of Freud's collection resides in its reflection of the concepts and theories of one of the great minds of the twentieth century. Adding an extra dimension to the exhibition of his treasured artifacts, the symposium papers illuminated the generation and significance of Freud's ideas through the filter of these ancient objects so precious to him.

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Athena, ***Roman, 1st or 2nd century A.D., after a Greek original of the 5th century B.C. Bronze, height 4 1/8 inches.***

(Courtesy of Freud Museum, London.)

Credits

Freud Museum, London

National Museum of Health and Medicine

The Pearson Museum

State Journal-Register, Springfield, IL

Cover illustration: An American Infantryman on the Niagara Frontier, ca. 1814. The artist, Douglas Landry, relied on extensive historical, artifactual, and archival research to determine that the depicted uniform was typical of those worn by units participating in the Fort Erie area conflicts. Mr. Landry is Chief of the Exhibits Division, National Museum of Health and Medicine, Armed Forces Institute of Pathology.

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